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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,815	08/25/2003	Michael C. Steiner	L&S-1	2352

7590

01/12/2005

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EXAMINER
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LU, JIPING

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/647,815	<b>Applicant(s)</b> STEINER, MICHAEL C.	
	<b>Examiner</b> Jiping Lu	<b>Art Unit</b> 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 5-25 is/are allowed.
- 6) ☒ Claim(s) 26,27,33-35,39,40,44 and 45 is/are rejected.
- 7) ☒ Claim(s) 28-32,36-38 and 41-43 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 41-43 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 41 failed to further limit the burner assembly tube in claim 40. Claim 39 does not include the limitation of burner assembly tube. Please change the dependency of 41 from "claim 39" to --claim 40--.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Brashears et al. (U. S. Pat. 4,492,171).

Brashears et al show a housing 20 defining a chamber with air inlet 47, a peripherally extending baffle 50 disposed inside said housing 20, a first peripheral air flow passage 48 formed between the baffle 50 and the housing 20, a peripherally extending combustion liner (at 23) disposed inside the baffle 50, a second peripheral extending air flow passage (not numbered) formed between the liner 23 and the baffle 50, a reversing diverter (at 22) disposed in said chamber, a burner assembly mounting plate (at 52) disposed in said liner (at 23), a burner barrel 21 formed on the first side of the burner mounting plate (at 52) and a plenum (not numbered) formed on the second side of the burner mounting plate (at 52).

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4. Claims 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Lange (U. S. Pat. 5,123,401).

Lange show a housing 29 defining a chamber with air inlet 32, a peripherally extending baffle 28 disposed inside said housing 29, a first peripheral air flow passage (not numbered) formed between the baffle 28 and the housing 29, a peripherally extending combustion liner 20 disposed inside the baffle 28, a second peripheral extending air flow passage (not numbered) formed between the liner 20 and the baffle 28, a reversing diverter (at 31) disposed in said chamber, a burner assembly mounting plate 37 disposed in said liner 20, a burner barrel formed on the first side of the burner mounting plate 37 and a plenum 33 formed on the second side of the burner mounting plate 37.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 33-35, 39, 40, 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brashears et al. (U. S. Pat. 4,492,171) or Lange (U. S. Pat. 5,123,401) in view of Faulkner (U. S. pat. 5,275,554).

The burner apparatus of Brashears et al. or Lange as above includes all that is recited in claims 33-35, 39, 40, 44-45 except for a plurality of burner assemblies mounted on the burner mounting plate. Faulkner teaches a combustion system with a plurality of burner assemblies 60 mounted on the burner mounting plate 64 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the

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burner apparatus of Brashears et al. or Lange with a plurality of burner assemblies as taught by Faulkner in order to improve the heating efficiency.

***Allowable Subject Matter***

7. Claims 1-3, 5-25 are allowed.
8. Claims 28-32, 36-38, 41-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

9. Applicant's arguments with respect to claims 26, 27 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

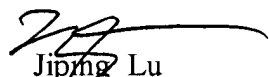
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272-4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jiping Lu  
Primary Examiner  
Art Unit 3749

J. L.